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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,902	06/24/2003	William S. Dworzan	Dworza. W-01	4885

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GENE SCOTT; PATENT LAW & VENTURE GROUP
3140 RED HILL AVENUE
SUITE 150
COSTA MESA, CA 92626-3440

EXAMINER

GRAHAM, GARY K

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/603,902

Applicant(s)

DWORZAN, WILLIAM S.

Examiner

Gary K Graham

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09152003, 05262004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn et al (US patent 5,987,681) in view of McDougall (US patent 6,421,866).

The patent to Hahn discloses the invention substantially as is claimed, including a head (2) with bristles (21) thereon integrally supported by neck (3). An eccentrically rotational weight (5) is engaged with motor (4) to be rotated thereby. The weight is shown provided next to the head (2), but it is disclosed that it may be mounted within the head if so desired (col. 3, lines 25+). It is also disclosed that the motor (4) may be mounted in the handle (1).

The patent to Hahn discloses all of the above recited subject matter with the exception of the head, neck and weight having a natural resonance frequency of vibration approximately matched to the rotational speed of the motor.

The patent to McDougall discloses a toothbrush having a rotational mass (29) mounted within the head (16) of the toothbrush to provide vibrations to the head (16) and thus bristles (17) to enhance cleaning. The mass is driven by a motor (11) within the handle (10). McDougall also discloses (col. 3, lines 18-26) that the brushing effects can be controlled from soft to medium to hard by varying the eccentricity of the rotational weight, the amount of weight, or the rotational speed of the driving shaft and thus the motor. Thus, the toothbrush can be set to different user requirements.

It would have been obvious to one of skill in the art to adjust or optimize the toothbrush of Hahn et al, by varying the rotational speed of the mass, the offset of the mass or the amount of the mass, as clearly suggested by McDougall, to provide the desired brushing effect. McDougall suggests the entire range of brushing effects. As such, it appears that one would, when attempting to maximize the brushing effect of the toothbrush, provide a rotational speed of the motor approximately matched to the natural resonance frequency of the head, neck and weight when providing for the hardest brushing possible. In other words, since McDougall clearly suggests that the rotational speed can be varied to adjust brushing intensity, maximum intensity or frequency matching would occur when the brush of Hahn is adjusted for the most intense brushing possible. If, as suggested by applicant, maximum velocity occurs when the toothbrush is tuned, Hahn would, when adjusted for maximum velocity, be tuned as well and thus have frequency matching. Thus, when optimizing the brush of Hahn for maximum brushing effect or maximum velocity, as clearly suggested by McDougall, it appears tuning of frequency matching would occur.

With respect to claim 11, as the head of Hahn includes bristles only on one side, it appears the center of mass will be shifted to one side of the drive shaft as is claimed.

Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn et al (US patent 5,987,681) in view of McDougall (US patent 6,421,866) as applied to claim 1 above, and further in view of Bock (US patent 5,247,716).

The patents to Hahn and McDougall disclose all of the above recited subject matter with the exception of the bristles being mounted in a removable brush and there being slidable engagement means to attach the brush to the head.

The patent to Bock discloses a toothbrush (20, fig.1) that includes a vibration generator (26) to enhance the cleaning effect of the toothbrush. Bock also discloses the brush (32) being slidably removable and using a tab (40) on the brush engageable with a tab receiver (42) on the supporting portion for releasably securing the brush with the handle (22).

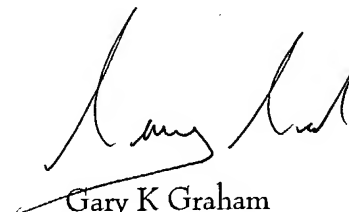
It would have been obvious to one of skill in the art to provide the modified brush of Hahn as removable, as clearly suggested by Bock, to enable brush only head replacement when the bristle become worn.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary K Graham whose telephone number is 571-272-1274. The examiner can normally be reached on Tuesday to Friday (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Warden can be reached on 571-272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Gary K Graham
Primary Examiner
Art Unit 1744